

2016

# Blue Hills State Reservation

## *Deer Management Plan*

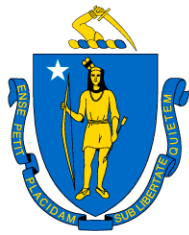
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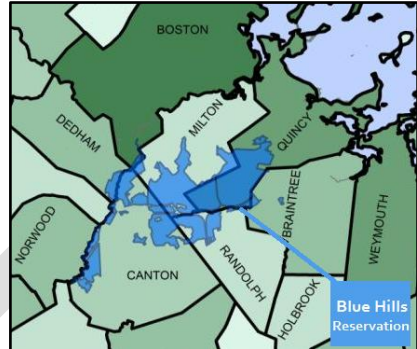


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## 1.0 The DCR Blue Hills Reservation

The Massachusetts Department of Conservation and Recreation (DCR) manages and stewards the Blue Hills Reservation. The Reservation encompasses an area of over 7,000 acres and is situated less than ten miles south of downtown Boston in the communities of Braintree, Canton, Dedham, Milton, Quincy, and Randolph. A small portion of Fowl Meadow (north and west of the Neponset River) is located within the Hyde Park neighborhood of the City of Boston. The protection of this area as public open space began over 120 years ago with its establishment in 1893 by the Metropolitan Park Commission. As a public parkland and forested area, the Reservation contains a wide variety of natural resources, vegetation, wildlife, and cultural and archaeological resources, and its topography includes prominent hills (Great Blue Hill and Chickatawbut Hill), as well as open fields and several ponds and streams.



## 2.0 Context for Deer Management in the Blue Hills Reservation

The Massachusetts Department of Conservation and Recreation (DCR) and the Massachusetts Division of Fisheries and Wildlife (MassWildlife) have legislative mandates and missions to protect and manage a myriad of natural resources including forests, wildlife, and the habitats upon which a diversity of wildlife depends. From the canopy to the understory, healthy forest ecosystems are made up of trees and plants of multiple species and age classes and a diversity of vegetation that provide suitable and sustainable habitat for a rich and varied wildlife community. From the perspective of long-term forest management, tree regeneration is critical to the survival of forests and their ability to recover from natural disturbances. Forests that contain high deer population densities prohibit forest regeneration as deer over-browse on young tree seedlings. In addition, extremely high deer densities can promote the spread of some invasive species and significantly reduce biodiversity.

As manager and steward of the Blue Hills Reservation, DCR has become increasingly concerned with the long-term health of the Reservation's forest and the ecological impacts of sustained high deer densities on this natural resource. DCR's management of the Blue Hills Reservation is guided by the existence of a comprehensive Resource Management Plan (RMP) that was approved by the DCR Stewardship Council in April 2011 following a robust planning and development process involving input from local residents, stakeholders, and the Friends of the Blue Hills.<sup>1</sup> The Blue Hills RMP noted a growing concern over the size of the deer population within the Reservation and the impact of over-browse on rare plants and other vegetation throughout the Reservation. In addition, the RMP explicitly recommended that the agency work with MassWildlife to ascertain the size of the deer population, determine its impacts on the Reservation's natural resources, and discuss

<sup>1</sup> The Friends of the Blue Hills is a non-profit organization that works both independently and in cooperation with the DCR to preserve the natural resources of and enhance recreational opportunities in the Blue Hills Reservation. For more information visit: [www.friendsofthebluehills.org](http://www.friendsofthebluehills.org).

deer management options.<sup>2</sup> As such, DCR and MassWildlife worked together to conduct a deer population survey in 2013 to estimate deer density in and around the Blue Hills Reservation. Using distance sampling as a survey method, MassWildlife estimated that there were about 85 deer per square mile of deer habitat within the Blue Hills (85% Confidence Interval [CI] = 65 - 107).<sup>3</sup>

In addition to following the recommendations within the Blue Hills RMP, DCR and MassWildlife were issued a legislative mandate in the 2014 Environmental Bond Bill ([Chapter 286 of the Acts of 2014](#)), which was signed into law by former Governor Deval Patrick in August 2014.<sup>4</sup> Specifically, Section 43 of the bond bill directs DCR (in consultation with MassWildlife) to “identify areas in which deer overpopulation is negatively impacting forestation, water resources, or plant growth on department-owned land” and “to develop and implement a harvest management plan for the identified areas.”

It is important to note that the decision to manage the overpopulation of deer in the Blue Hills Reservation is not dependent upon perceptions regarding the role of deer in relation to Lyme disease or other tick-borne illnesses. DCR recognizes the myriad of research that has demonstrated mixed results over the last several decades with regard to the correlation between deer densities, tick abundance, and Lyme disease contraction rates among humans. Furthermore, attempting to solve Lyme disease or reduce contraction rates is not a primary goal of DCR’s deer management plan for the Blue Hills. Rather, as stewards of the Blue Hills Reservation, it is DCR’s objective to reduce (and in the long-term reverse) the negative impacts of high deer densities on the Reservation’s vegetation, promote the restoration of healthy habitat for other wildlife, and bring deer densities to a level more aligned with what the forest can sustain.

In light of each agency’s mission, the recommendations outlined in the Blue Hills RMP, the results of the deer abundance survey, the legislative mandate detailed in the 2014 Environmental Bond Bill, and pursuant to the 2015 [Blue Hills Deer Management Plan](#); DCR and MassWildlife (together with our partners in the Massachusetts Environmental Police and Massachusetts State Police) successfully and safely implemented the first-ever controlled deer hunt in the Blue Hills during the 2015 shotgun season.<sup>5</sup>

### 3.0 Rationale & Objectives for Deer Management in the Blue Hills Reservation

In deciding to undertake a deer management program in the Blue Hills Reservation, the primary objective and rationale for intervening is to maintain an ecologically sustainable deer density that

<sup>2</sup> To view a copy of the approved 2011 Blue Hills Resource Management Plan please visit: <https://www.mass.gov/eea/docs/dcr/stewardship/rmp/bh/sections1-4.pdf>. Appendices can be viewed at: <http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bh/appendices.pdf>.

<sup>3</sup> To view a copy of MassWildlife’s 2013 Blue Hills deer abundance survey report, please visit: <https://www.mass.gov/eea/docs/dcr/parks/south/blue-hills-deer-survey-report.pdf>.

<sup>4</sup> To view Chapter 286 of the Acts of 2014, please visit: <https://malegislature.gov/Laws/SessionLaws/Acts/2014/Chapter286>.

<sup>5</sup> To view the 2015 Blue Hills Reservation Deer Management Plan, which includes a detailed background on the deer overabundance problem, an overview of the various management approaches analyzed, and a description of the components of the management program please visit: <http://www.mass.gov/eea/docs/dcr/news/public-meetings/materials/parklands/blue-hills-deer-management-plan.pdf>.

To view a copy of DCR & MassWildlife’s Program Overview & Results Report for the 2015 controlled hunt please visit: <http://www.mass.gov/eea/docs/dcr/2015-program-report.pdf>. This report provides in-depth details regarding the 2015 hunt’s logistics, operations, and harvest results.

allows for the continuous growth and development of forest regeneration. In particular, DCR wishes to reduce the negative impacts that high deer densities have on the regenerating forest to ensure a healthy forest composed of adequate diversity of species and age classes. Moreover, DCR's program for white-tailed deer management is not intended to provide a new recreational opportunity in the Blue Hills. Rather, the program provides a concrete, practical, and workable solution intended to deal with a critical environmental problem.

## 4.0 2016 Blue Hills Controlled Hunt Program Components

The use of licensed public hunters in managing deer populations is one of the most widely used management methods employed throughout the United States. In Massachusetts, it is the primary management tool supported by MassWildlife and has been shown to be successful in addressing situations involving deer overabundance and vegetation over-browse. The Quabbin Reservoir Watershed is the most notable example. In addition, DCR manages thousands of acres of forest and parkland across the Commonwealth where licensed hunters are allowed to hunt game during the appropriate seasons. Moreover, hunting is an activity that DCR fully supports by providing public land for hunters to engage in this management activity.

Given the suburban/urban nature of the areas surrounding the Blue Hills Reservation and the fact that legal hunting had not taken place in the Blue Hills in over 100 years, the 2015 controlled hunt was intentionally designed to be very conservative. The 2015 hunt was implemented on a limited scale (only 2,980 of the Reservation's more than 7,000 acres were opened to hunting), featured low hunter densities, and allowed for only four days of hunting. These measures were employed with an understanding that if the initial hunt proved safe, future hunts could be enhanced to a more appropriate level in order to increase efficacy.

To continue the successful efforts undertaken in 2015, and as outlined in the initial [Blue Hills Deer Management Plan](#), DCR and MassWildlife will implement another controlled hunt in the Blue Hills Reservation during the 2016 shotgun season in late November/early December 2016.

As was acknowledged in the 2015 management plan, managing deer populations is a complex and dynamic process that is shaped and influenced by a variety of interdependent factors. As a result, DCR recognizes that effective deer management programs must provide and maintain a good degree of flexibility in order to make modifications and adjustments that are grounded in experience and ongoing assessment. Based upon the experience of implementing and assessing the 2015 controlled hunt, DCR and MassWildlife have worked together to develop enhancements to the Blue Hills Deer Management Program. The following sections provide an overview of several key program components to be implemented as part of the 2016 controlled hunt.

**4.1 - Timing and Length:** The timeframe for the 2016 controlled hunt will be during the annual shotgun season in late November/early December. Although the shotgun season in Massachusetts lasts approximately two weeks, the 2016 controlled hunt will feature a total of six (6) days of hunting. These six days will be divided into three, two-day segments as outlined below:

- Segment 1: Tuesday, November 29<sup>th</sup> and Wednesday, November 30<sup>th</sup>
- Segment 2: Monday, December 5<sup>th</sup> and Tuesday, December 6<sup>th</sup>
- Segment 3: Thursday, December 8<sup>th</sup> and Friday, December 9<sup>th</sup>

**4.2 - Hunting Implements:** In 2016, participants will be allowed to use shotguns with slugs only. Buckshot shall be prohibited from use in the Blue Hills. In addition, the limited use of archery

hunting will be allowed in certain designated areas of the Reservation. Although the archery season in Massachusetts typically begins in October, archery hunting will only be allowed within the Reservation during the six days of the controlled hunt. The rationale for including archery hunting is to allow for some level of management to take place in areas where the use of shotgun hunting might be less desirable at this time. To see which areas of the Reservation will be open to shotgun and archery hunting, please refer to the map on page 8.

**4.3 - Management Zones and Hunter Distribution:** In order to organize and distribute hunters effectively, the Blue Hills will be sub-divided into several management zones. Permittees will receive their zone assignments upon issuance of an access permit. Once assigned, permittees will be required to stay within their assigned zone while hunting. Archery hunters will not be allowed to hunt in areas designated for shotgun hunting and shotgun hunters will not be allowed to hunt in areas designated for archery hunting.

Controlled hunting will only be allowed in designated areas of the Blue Hills Reservation and within the boundaries that have been identified. In 2016, hunting will take place in areas both north and south of I-93. Hunter distribution shall be determined using the following ratios:

- Shotgun Hunting Areas: 1 hunter per 30 acres
- Archery Hunting Areas: 1 Hunter per 15 acres

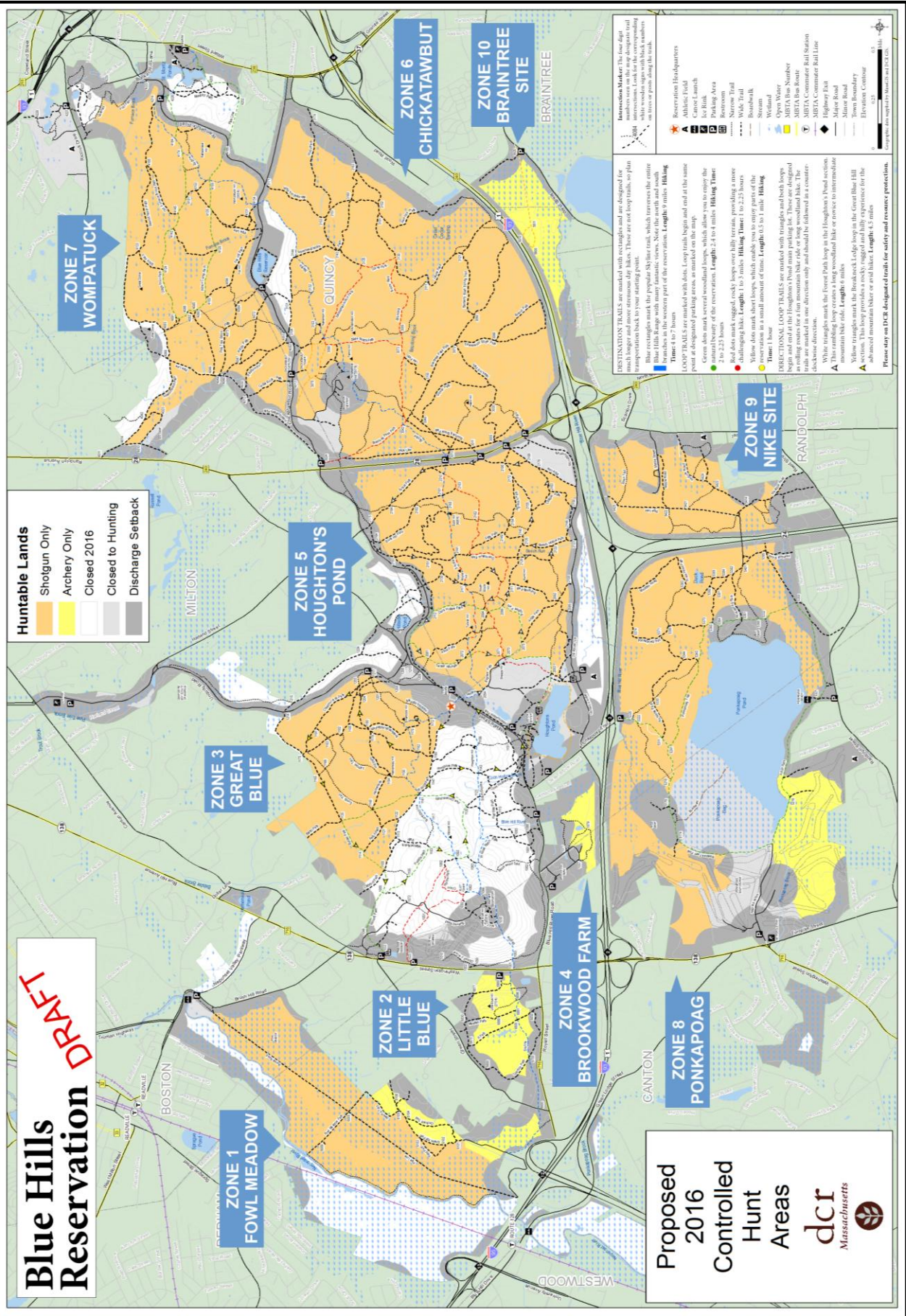
The designated areas have been divided into the following ten (10) management zones and - based upon the acreage allocated to either shotgun or archery hunting - each zone will have the following number of hunters for each type of hunting implement:

Management Zone	Acres Open to Shotgun Hunting	Acres Open to Archery Hunting	Number of Shotgun Hunters	Number of Archery Hunters
1 - Fowl Meadow	330	51	11	3
2 - Little Blue	0	71	0	5
3 - Great Blue	353	0	12	0
4 - Brookwood Farm	0	27	0	2
5 - Houghton's Pond	574	0	19	0
6 - Chickatawbut	1,004	0	33	0
7 - Wompatuck	561	0	19	0
8 - Ponkapoag	497	114	17	8
9 - Nike Site	176	0	6	0
10 - Braintree Site	0	77	0	5
<b>TOTAL</b>	<b>3,495</b>	<b>340</b>	<b>117</b>	<b>23</b>



# Blue Hills Reservation

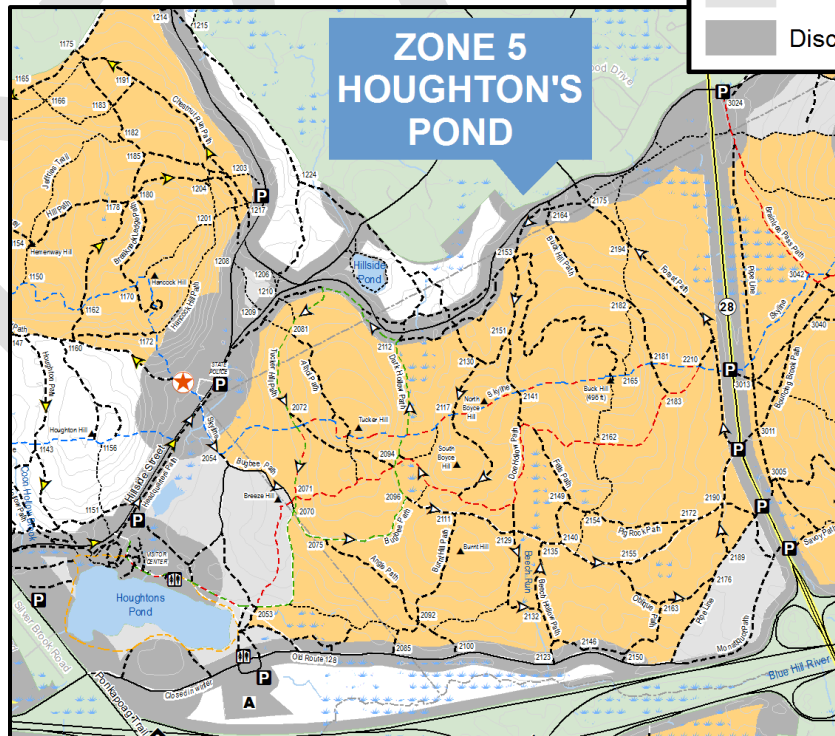
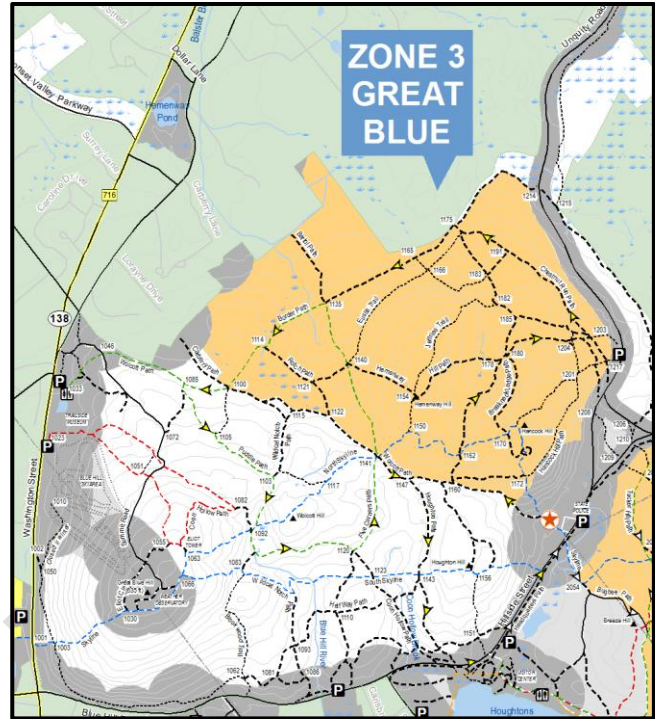
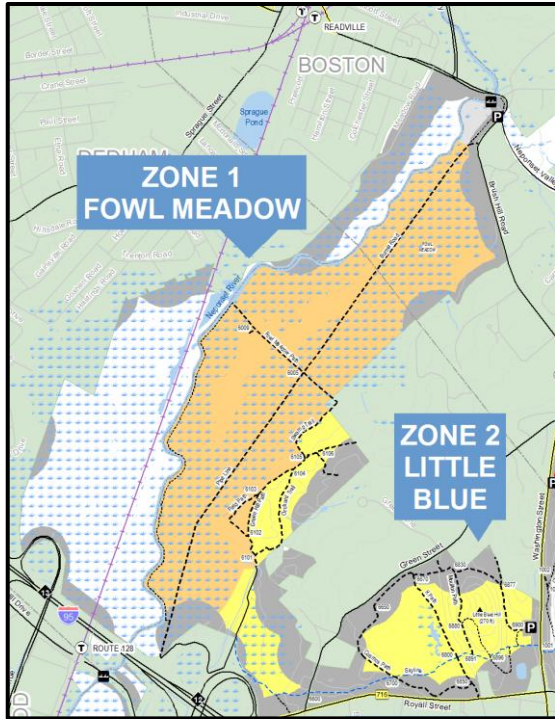
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Proposed  
2016  
Controlled  
Hunt  
Areas

dcrc  
Massachusetts

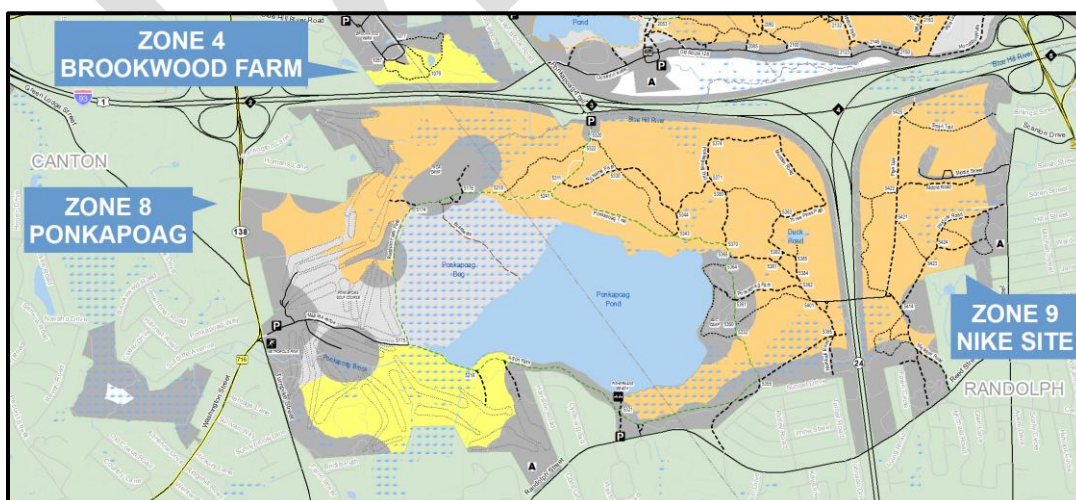
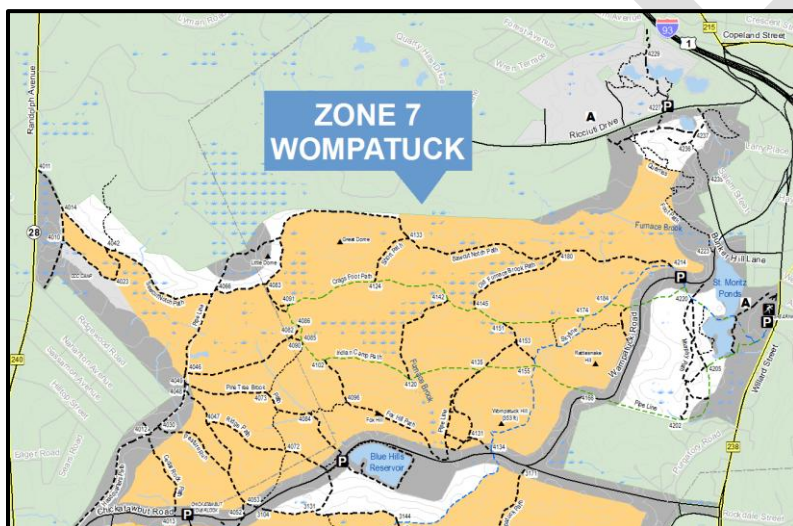
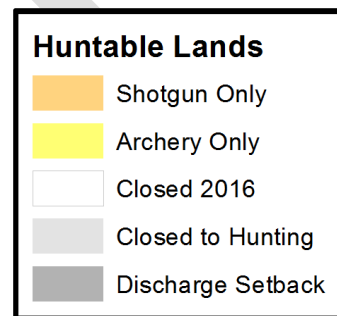
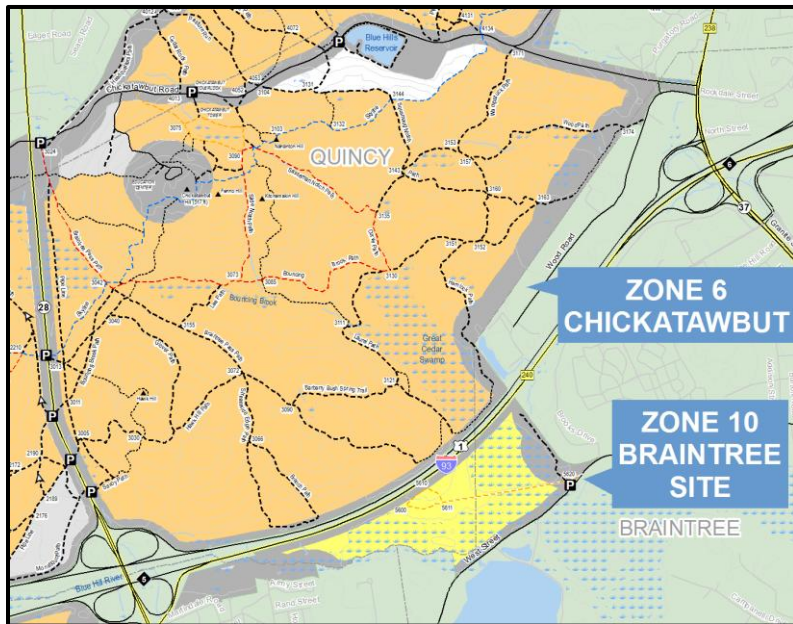




### Huntable Lands

- Shotgun Only
- Archery Only
- Closed 2016
- Closed to Hunting
- Discharge Setback





**4.4 - Participation and Access Permitting:** Similar to the 2015 hunt, the 2016 Blue Hills controlled hunt will feature an access permitting component whereby interested hunters will need to complete and submit an application to DCR. All applicants must have a valid 2016 Massachusetts hunting license and those who live in the Commonwealth of Massachusetts must also have a valid FID card. Using a random lottery system, permittees will be selected from among the pool of applicants. There will be no fee to apply to the 2016 controlled hunt program.

Given the use of both shotgun hunting and archery hunting, there will be a separate application for shotgun hunters and archery hunters. In addition, DCR will also be enforcing the following rules and provisions with regard to applications:

**General Application Rules & Provisions:**

- Hunters will only be allowed to submit one (1) application and their name can only appear on one application. Hunters found to be listed on multiple applications will be automatically removed from the applicant pool.
- Hunters are not allowed to submit both a shotgun and an archery application - they must choose either one or the other. Hunters who submit both a shotgun and an archery application will be automatically removed from the applicant pool.
- Permittees will be allowed to hunt during one of the two-day segments. As such, each permittee may hunt for up to two days and will be issued separate permits for each day that they hunt. Furthermore, different groups of hunters will be selected to participate in each of the three, two-day segments. Applicants will be required to select which hunting dates they prefer on their application.

**Archery Application Rules & Provisions:**

- Applications for archery hunting will allow for only one (1) applicant.
- If selected to participate, any archery applicant under the age of 18 must be accompanied by an adult over the age of 21 who is also a registered hunter possessing a valid Massachusetts hunting license.

**Shotgun Application Rules & Provisions:**

- Applications for shotgun hunting will allow for up to two (2) applicants (one “primary applicant” and one “co-applicant”).
- To promote fairness, hunters listed as the “primary applicant” on one application cannot be listed as “co-applicant” on another application.
- To promote fairness, hunters listed as a “co-applicant” on one application cannot submit a separate application in which they are the “primary applicant” nor can they be listed as a “co-applicant” on any other application.
- Any hunter found to be listed as either a “primary applicant” or a “co-applicant” on more than one application will be automatically removed from the applicant pool.
- Hunters who are under the age of 18 and possess a valid Massachusetts hunting license may apply as either a “primary applicant” or a “co-applicant” on one application. Any hunter under the age of 18 who applies as the “primary applicant” must list a “co-applicant” who is over the age of 21 and is also a registered hunter possessing a valid Massachusetts hunting license.

**4.5 - Antlerless Permits:** Similar to 2015, MassWildlife will make antlerless deer permits specific to the Blue Hills Reservation controlled hunt available to applicants that are selected for an access permit. Upon successful completion of a hunter orientation session, hunters will be able to purchase their antlerless permits online, or at any licensed vendor. As was the case in 2015, hunters selected to participate in the hunt will be required to purchase two (2) antlerless permits. Individual hunters will not be allowed to purchase more than four (4) antlerless permits. The use of any Zone 10 antlerless permits will also be prohibited from use in the Blue Hills.

**4.6 - Hunter Orientation:** All permittees will be required to attend an orientation session organized and hosted by DCR, MassWildlife, and our partner agencies. Among other topics, the orientation will cover: the elements of the Blue Hills deer management plan; the goals and objectives of the program; an orientation to the area; safety considerations; and area assignments. Non-attendance of this orientation will automatically result in a permittee's removal from the program.

**4.7 - Check-in/Check-out Procedures:** All permittees will be required to check-in and check-out of the Reservation each day that they hunt. Check-in will take place in the parking lot at the Houghton's Pond Recreation Area. Check-in will begin at 4:30 AM and hunters will not be allowed to begin hunting until one half hour before sunrise (as stipulated in state hunting regulations). In addition, all hunters will be required to check-out no later than 4:00 PM given the general time for sunset in late November/early December.

**4.8 - Deer Cleaning and Checking:** Permittees who harvest a deer are required to move the deer at least 100 feet away from a trail for the purposes of gutting and cleaning the deer. Hunters who harvest a deer are responsible for transporting the deer to their vehicle and all harvested deer must be taken to the deer check station to be officially sealed.

**4.9 - Scouting:** Permitted hunters will be allowed to scout the Reservation prior to the controlled hunt. Any hunter who is scouting within the Blue Hills must carry on their person their hunter identification and the letter they receive from DCR indicating that they have been selected to participate in the controlled hunt. Scouting will not be allowed on those days in which the controlled hunt is actually taking place.

**4.10 - Tree Stands:** Permittees will be allowed to use tree stands while participating in the controlled hunt. Permitted hunters will be allowed to install tree stands the day before their first day of hunting. Tree stands must be removed no later than the day after each hunting segment. Specifically:

- Hunters selected to participate in Segment 1 (November 29<sup>th</sup> and 30<sup>th</sup>) will be allowed to install their tree stand on November 28<sup>th</sup> and must remove the tree stand by December 1<sup>st</sup>.
- Hunters selected to participate in Segment 2 (December 5<sup>th</sup> and 6<sup>th</sup>) will be allowed to install their tree stand on December 4<sup>th</sup> and must remove the tree stand by December 7<sup>th</sup>.
- Hunters selected to participate in Segment 3 (December 8<sup>th</sup> and 9<sup>th</sup>) will be allowed to install their tree stand on December 7<sup>th</sup> and must remove the tree stand by December 10<sup>th</sup>.

The installation of a tree stand does not entitle a hunter to a particular area of the Reservation. Hunters possessing a permit to hunt in a particular management zone may hunt in any area within the boundaries of that zone. However, archery hunters will not be allowed to hunt in areas designated for shotgun hunting and shotgun hunters will not be allowed to hunt in areas designated for archery hunting.

In accordance with DCR's regulation at 302 CMR 12.11 (10), the installation of a permanent tree stand will not be allowed. Permanent tree stands are defined as a type of hunting platform or



structure (emplaced for any period of time) which is fastened to a tree by nails, bolts, wire, or other fasteners which intrude through the bark into the wood of the tree.

**4.11 - Violations:** Any violation of the rules of this controlled hunt program will result in the immediate removal from the property and suspension of access to the Blue Hills Reservation hunt in future years. In addition, any person found to be hunting within the Reservation without a valid access permit will be immediately removed from the property, will be prohibited from applying to participate in the controlled hunt in future years, and may be subject to any fines or penalties prescribed by applicable state laws and/or regulations.

**4.12 - Roadway Restrictions:** As was the case in 2015, DCR will once again institute a closure of Chickatawbut Road (from Route 28/Randolph Avenue to Route 37) on those days in which hunting is taking place. In addition, DCR will also close Wompatuck Road (from Chickatawbut Road to Route 37) to regular vehicular traffic. Road closures will be in effect each day of the controlled hunt until 5:00 PM. After checking in, permitted hunters will be allowed access onto Chickatawbut Road and Wompatuck Road and will be allowed to park along these roads while hunting. DCR will work with other state and local agencies to announce (via the web, press/media, social media, etc.) the road closure in advance. In addition, DCR will post variable message boards at appropriate locations in advance of the hunt to announce road closures.

**4.13 - Vehicular Access:** Permitted hunters will not be allowed to park along the sides of I-93 or Route 24. In addition, vehicular access will be prohibited on the Reservation's trails. Hunters with a valid access permit will be allowed to park along Chickatawbut Road and Wompatuck Road while hunting. During the hunter orientation sessions, DCR will provide permittees with maps identifying available parking areas in each of the management zones.

**4.14 - Unified Command:** The safe, successful, and smooth operation of the 2015 Blue Hills controlled hunt is largely due to the integrated and meticulous inter-agency coordination among DCR, MassWildlife, the Massachusetts Environmental Police (MEP), the Massachusetts State Police (MSP), and local law enforcement agencies facilitated by the unified command structure implemented during the controlled hunt. This model will once again be utilized during the implementation of the 2016 controlled hunt.

Similar to 2015, a Unified Command Center (UCC) will be established and stationed near the Park Headquarters and the MSP Barracks on Hillside Street. The UCC will be staffed throughout the controlled hunt by operational decision-makers from DCR, MassWildlife, MEP, and MSP, as well as representatives from local police departments. The UCC will facilitate and ensure centralized coordination of on-the-ground resources, communication, and management of any issues or situations that may arise.

**4.15 - Public Information, Outreach and Signage:** In advance of the 2016 controlled hunt, DCR will work with other state and local agencies and the Friends of the Blue Hills to ensure the public and neighbors are informed of when and where the hunt will take place. This includes issuing press releases, posting information on websites and via social media outlets, placement of variable message boards at key park entrances and intersections, and delivering informational flyers to neighbors in advance of the hunt. DCR will also post appropriate signage at trailheads and on all bulletin boards and informational kiosks (before and during the hunt) to inform the public of the hunt. Informational flyers/notices and any postings on websites or social media will also include contact information for the public to report any concerns or ask questions while the hunt is taking place.

**4.16 - Public Recreational Access:** While general public access for recreation will not be restricted in those areas in which hunting will take place, DCR will be encouraging the general public to utilize the trails and amenities that are available south of Wolcott Path in the Great Blue



Hill section of the Reservation. No hunting will be allowed south of Wolcott Path during the 2016 controlled hunt. In addition, members of the general public who choose to enter those areas in which hunting will be taking place are advised to take proper precautions by wearing blaze orange clothing, vests, and hats.

## 5.0 Deer Abundance Surveying and Subsequent Years

MassWildlife's Blue Hills Reservation Deer Abundance Survey Report recommended the performance of a follow-up population survey between two to three years after commencement of a hunting program. As such, DCR and MassWildlife will coordinate and conduct a follow-up deer abundance survey in early 2017.

With regard to future controlled hunts, DCR and MassWildlife remain committed to the ongoing implementation of a deer management program in the Blue Hills Reservation. As noted previously, the management of deer populations is a dynamic and complex process and success requires a continuing commitment to not only reduce overabundant populations in the short-term but to maintain a healthy herd size over the long-term. As outlined in the 2015 [Blue Hills Deer Management Plan](#), DCR and MassWildlife will continue to assess the outcomes and operations of annual controlled hunts and the findings of periodic deer abundance surveys in order to make appropriate modifications and adjustments over time.

## 6.0 Vegetation Monitoring Efforts

DCR's Bureau of Forest Fire Control and Forestry will continue with existing vegetation monitoring efforts to further study impacts to vegetation by deer in the Reservation.

**6.1 - Deer Enclosures:** As part of the effort to quantify the impacts of deer within the Blue Hills, deer enclosures were established in 2011 to measure vegetation species abundance and growth patterns growing within the enclosure and at a control point just outside of the enclosure where deer can browse. There are two such enclosures in the Blue Hills. These enclosures will be inventoried on a yearly basis to measure growth inside and outside the enclosures. A new enclosure was installed this past spring to expand on the data collection.

**6.2 - Vegetation Sampling:** In addition to the established enclosures, vegetation sampling plots were established throughout the Reservation. The sampling is expected to show low levels of regeneration occurring in the upland portions of the Blue Hills Reservation due to high levels of white-tailed deer browse. Sampling will occur during the end of June, July, August, and the beginning of September. An initial baseline vegetation survey report was completed in March 2016.<sup>6</sup> DCR will continue to closely monitor vegetation across the Reservation as the managed hunts continue.

<sup>6</sup> To view a copy of the March 2016 Blue Hills Vegetation Survey Report, please visit: <http://www.mass.gov/eea/docs/dcr/bh-2016-vegetation-survey-report.pdf>.